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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,551	12/04/2003	Christopher E. Phillips	42P16936C	8778

7590 06/27/2008  
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EXAMINER
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CONNOLLY, MARK A

ART UNIT	PAPER NUMBER
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2115

MAIL DATE	DELIVERY MODE
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06/27/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/728,551

**Applicant(s)**

PHILLIPS ET AL.

**Examiner**

MARK CONNOLLY

**Art Unit**

2115

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-10-14-16-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 9-15 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 8-22 have been presented for examination.

***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Vorbach<sup>1</sup> US Pat No 6571381.
4. Referring to claim 8, Vorbach teaches the system comprising:
  - a. a reconfigurable chip including reconfigurable logic and multiple configuration planes, the reconfigurable chip including a configuration table with multiple entries in which to store configuration content, wherein one or more of such entries are associated with a configuration plane and identify an off-chip address of a loaded configuration [abstract, col. 5 lines 61-64, col. 9 lines 23-24 and col. 10 lines 1-20 and col. 11 lines 36-48]. In particular, Vorbach teaches a configuration table (CT) arranged in a tree structure, which, at the lowest levels (leaves) represent configurations for the individual configurable elements (CELs) in the reconfigurable system. The levels above the leaves store additional configurations for the CELs in a memory (CTR) and when a new configuration is requested, the LOAD request traverses up the tree structure requesting a configuration ID (KR<ID> which is the address of the configuration in external configuration memory (ECR)) until the required configuration is found wherein the configuration is then sent down to the leaf/leaves making the request. But the configuration specified by the configuration ID, is indirectly referenced and using a jump

table, a KR(ID) will be specified and translated within the jump table to point to the start address of where the KR is located. Therefore, the jump table stores both the identified configuration (i.e. a requested on-chip configuration for the CEL) as well as the configurations unique off chip address.

- b. a memory system, coupled with the reconfigurable chip, to store at least a subset of the configurations associated with configuration planes of the reconfigurable chip [col. 3 lines 1-13].
5. Referring to claim 10, Vorbach teaches specifying an address of a boot configuration in the table and loading the boot configuration on boot up [col. 10 lines 52-55 and col. 11 lines 36-41].
6. Referring to claim 11, this is rejected on the same basis as set forth hereinabove.
7. Referring to claims 12 and 13, Vorbach teaches loading new configurations for reconfiguring the CELs within a reconfigurable system [col. 8 lines 42-45 and col. 9 lines 23-24]. The CELs are reconfigured if they are in a reconfigurable state. Reconfiguring the CELs is interpreted as activating a configuration plane with the loaded configuration. Since the old configuration is no longer loaded in the CELs, it is interpreted that they are unloaded from the active configuration plane.
8. Referring to claim 14, this is rejected on the same basis as set forth hereinabove.
9. Referring to claims 16 and 17, these are rejected on the same basis as set forth hereinabove. In particular, when a RESET occurs thus necessitating a boot sequence, the CT loads a boot configuration at address BOOT ADR, wherein the address is stored in the CT [col. 10 lines 52-55].

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<sup>1</sup> As cited in the previous office action.

10. Referring to claim 18, this is rejected on the same basis as set forth hereinabove. Vorbach teaches the method and therefore teaches the system performing the method. In addition, Vorbach teaches having CTs comprising CTRs which cache configurations in addition to the ECR which stores all configurations. The CTs are interpreted as storing at least a subset of the configurations.

11. Referring to claim 19, Vorbach teaches the memory system is one or more memory devices [col. 5 lines 58-67].

12. Referring to claim 20, Vorbach teaches the memory system is a local internal memory [col. 5 lines 66-67].

***Claim Rejections - 35 USC § 103***

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vorbach as applied to claims 8,10-14 and 16-20 above.

15. Referring to claim 22, Vorbach teaches a program pointer (PP) which points to configuration words (KW) within the configuration data to be executed [col. 8 lines 40-41]. Although Vorbach teaches that the KW being executed is in the CTS which are in the CTs, when booting, the all configuration data is located in the ECR memory. Since the PP is necessary to keep track of which KW should be executed, it is obvious that during boot, the PP would point to address locations in the ECR since that is where the KWs in the boot configuration are initially stored.

***Allowable Subject Matter***

16. Claims 9, 15 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

17. Applicant's arguments filed 2/11/08 have been fully considered but they are not persuasive.

18. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In particular, applicant plainly "submits that using an ID as an address to identify the start of a KR, as arguably taught by Vorbach in the above recited language, is clearly different than multiple entries in a table with each entry identifying an on-chip configuration plane and identifying a unique off-chip address of a loaded configuration."

19. Referring to applicant's argument that Vorbach fails to disclose all the elements or features of the claimed subject matter, applicant is directed to the above claim rejections.

***Conclusion***

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK CONNOLLY whose telephone number is (571)272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Connolly/  
Primary Examiner, Art Unit 2115

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